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10/615,092	07/07/2003	Koji Kawano	36856.1094	8684

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EXAMINER	
INGVOLDSTAD, BENNETT	
ART UNIT	**PAPER NUMBER**
2427	

NOTIFICATION DATE	DELIVERY MODE
01/07/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/615,092	KAWANO ET AL.	
	Examiner	Art Unit	
	Bennett Ingvoldstad	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 15 October 2008 have been fully considered.

2. Applicant argues the combination of AAPA and Matsuura, pointing out that AAPA's amplifier is located outside the tuner case, in contrast to Applicant's claimed amplifier which is inside the tuner case. Applicant goes on to argue that Matsuura does not remedy AAPA's deficiency because it does not teach an arrangement of the amplifier with respect to a tuner case. Remarks/Arguments, pg. 7.

3. This argument is not persuasive. Matsuura teaches that the amplifiers 5 and 6 are located in between an input terminal 1 and output terminals 12 and 14. Thus, one of ordinary skill would conclude that the amplifier is inside the case or housing by virtue of being in between the input terminal and the output terminal, and the claimed limitations are met.

4. Applicant further argues the combination, suggesting AAPA's disclosure of an amplifier outside the case teaches away from a modification to put the amplifier inside the case. Remarks/Arguments, pg. 8. This argument is not persuasive. As illustrated by Matsuura and AAPA, an amplifier may be located either inside or outside a tuner case, and it will still provide the same amplifying function. Thus, AAPA's decision to place the amplifier outside the tuner case was merely a design choice, and one of ordinary skill could have easily moved the amplifier to be inside the tuner case, as taught by Matsuura, without impacting the functioning of the system as a whole.

5. Applicant further argues the examiner's rationale for combining AAPA with Matsuura "for the purpose of removing unwanted frequency components before amplifying the signal." Applicant cites AAPA's highpass and bandpass filters as already removing unwanted frequency components. Remarks/Arguments, pg. 8. However, AAPA's bandpass filter 12 only filters upstream signals. AAPA only has a highpass filter 13 for filtering downstream signals. Thus, the addition of the lowpass filter taught by Matsuura still improves the filtering capabilities of AAPA, and the combination would have been recognized as desirable by one of ordinary skill.

6. Therefore the previous rejections are upheld.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Matsuura (US 6751803).

Claim 1: AAPA teaches a CATV tuner, comprising:

a tuner case (Figs 4, 5: dotted line – see spec. pg. 3);

an input circuit connected to an input terminal for transmitting and receiving a signal to and from a CATV station, the input circuit including an upstream-signal

input terminal, a distributor, […], an amplifier, and a downstream-signal output terminal [Figs 4-5];

a first mixer circuit for mixing an output signal from the input circuit and a first local-oscillation signal so as to generate a first IF signal (element 4 [Fig 4]);

a first oscillation circuit for transmitting the first local-oscillation signal to the first mixer circuit (element 5 [Fig 4]);

a first IF circuit for processing the first IF signal (element 6 [Fig 4]);

a second mixer circuit for mixing an output signal from the first IF circuit and a second local-oscillation signal so as to generate a second IF signal (element 7 [Fig 4]); and

a second oscillation circuit for transmitting the second local-oscillation signal to the second mixer circuit (element 8 [Fig 4]); and

a second IF circuit for processing the second IF signal (element 9 [Fig 4]);

wherein at least one upstream signal is input to the upstream-signal input terminal so as to be transmitted to the CATV station (via upstream signal input 11 [Fig 5]), the distributor distributes a reception signal to generate at least two distributed signals (distributor 14 [Fig 5]) and transmits one of the distributed signals to the downstream-signal output terminal as a downstream signal so that the downstream signal is output therefrom (terminal 15 [Fig 5]);

the distributor is arranged between the upstream-signal input terminal of the input circuit and the first mixer [AAPA Spec pg. 2, para 3]; and

the distributor … [is] disposed in the tuner case (Fig. 4)

AAPA discloses that the amplifier 16 is outside of the tuner case instead of inside the tuner case between the distributor 14 and the terminal 15 as claimed, and AAPA further does not disclose a low pass filter as claimed.

Matsuura discloses a branch circuit similar to AAPA's 14-15-16 branch [AAPA Fig 5] wherein "the amplifier is arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal" (amplifier 5/6 is between the distributor 2 and output terminals 12/14 [Matsuura Fig 1]), and "the low-pass filter is arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal" (band pass filter 4 comprises a 300MHz low pass filter located between distributor 2 and amplifier 5/6 for removing unnecessary signal components [Matsuura Fig 1, col. 6, l. 1-11]).

Matsuura's amplifier is located inside the case or housing by virtue of being located in between input terminal 1 and output terminals 12 and 14.

The simple substitution of one element for another to yield predictable results is obvious. Therefore it would have been obvious to make the simple substitution of replacing AAPA's circuit branch with Matsuura's circuit branch, thus replacing AAPA's amplifier 16 and output terminal 15 with Matsuura's amplifier 5/6, filter 4, splitter 7, and output terminals 12 and 14. The combination would have yielded the predictable results of low-pass filtering the downstream signal prior to amplifying, and then outputting the filtered and amplified signal outside the tuner

case via output terminals. The combination would have been desirable for the purpose of low-pass filtering the downstream signals before amplification, and for protecting the amplifier inside the tuner case.

AAPA in view of Matsuura teaches:

2. A CATV tuner according to Claim I, further comprising a high-pass filter arranged between the distributor and the amplifier so as to block the upstream signal (BPF 4 comprises a 70MHz high-pass filter [Matsuura Fig 1]).

AAPA in view of Matsuura teaches:

3. A CATV tuner according to Claim 2, wherein the high-pass filter and the low-pass filter define a bandpass filter (BPF 4 [Matsuura Fig 1]).

AAPA in view of Matsuura teaches:

Claim 6 (currently amended): A CATV tuner according to Claim 1, wherein the input circuit is provided in the tuner case (AAPA Figs 4, 5: all of the circuit except the amplifier is inside the dotted-line case; Matsuura Fig 1: the amplifier is between the input and output terminals i.e. inside the case. See the combination in the claim 1 rejection).

AAPA in view of Matsuura teaches:

7. A CATV tuner according to Claim 1, wherein an output from one end of the distributor is transmitted to the downstream-signal output terminal via the low-pass filter and the amplifier (to output terminals 12/14 via filter 4 and amplifier 5/6 [Matsuura Fig 1]).

AAPA in view of Matsuura teaches:

8. A CATV tuner according to Claim 1, wherein an output from one end of the distributor is subjected to processing and transmitted to the first mixer circuit [AAPA Spec pg. 2, para 3].

AAPA in view of Matsuura teaches:

10. A CATV tuner according to Claim 1, wherein the low-pass filter functions as a matching circuit for making the downstream signal transmitted from the distributor suitable to be input to the amplifier (the output of the filter 4 is input to the amplifier 5/6 [Matsuura Fig 1]).

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Matsuura (US 6751803) and Shaw (US 5953043).

Claims 4 and 5: AAPA in view of Matsuura does not teach a resistor arranged between the amplifier and the downstream signal output terminal.

Shaw discloses a series resistor between an amplifier and an output terminal [Fig 1A].

It would have been obvious to use a resistor following the teaching of Shaw for the purpose of impedance matching the transmission signal [Shaw col. 3, l. 53-55].

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Ingvoldstad whose telephone number is (571)270-3431. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/ 12/30/2008
Primary Examiner, Art Unit 2421

/Bennett Ingvoldstad/
Examiner, Art Unit 2427